



2010 Integrated Energy Policy Report Update

Integrated Energy Policy Report Committee Hearing

November 1, 2010
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Agenda

- Opening Remarks
- Overview of Committee Draft 2010 IEPR update
- Public Comments



Background

- **Public Resources Code Section 25301(a):** “At least every two years, the commission shall conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety.”

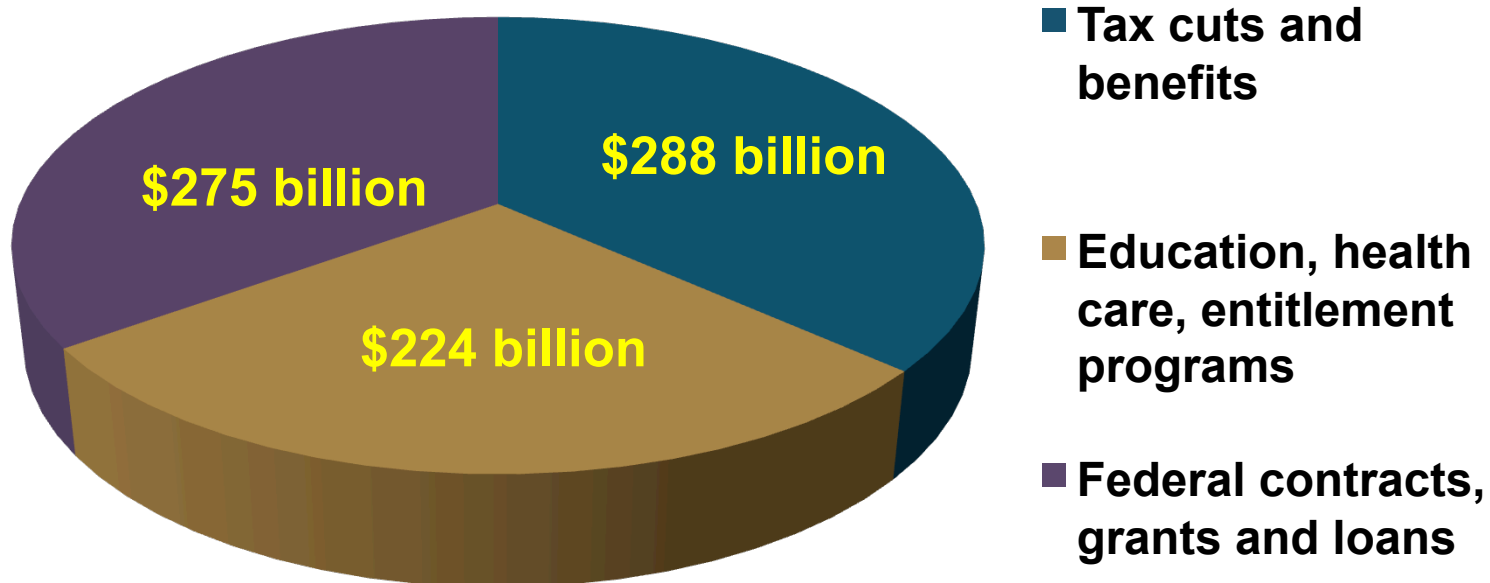


Public Process

- Six workshops
 - MV&E (6/14)
 - State and local government building retrofit programs (7/8)
 - Clean technology innovation (7/13)
 - Clean energy jobs and workforce development (7/21)
 - Clean energy manufacturing (7/22)
 - Energy efficiency and regional partnerships (9/28)

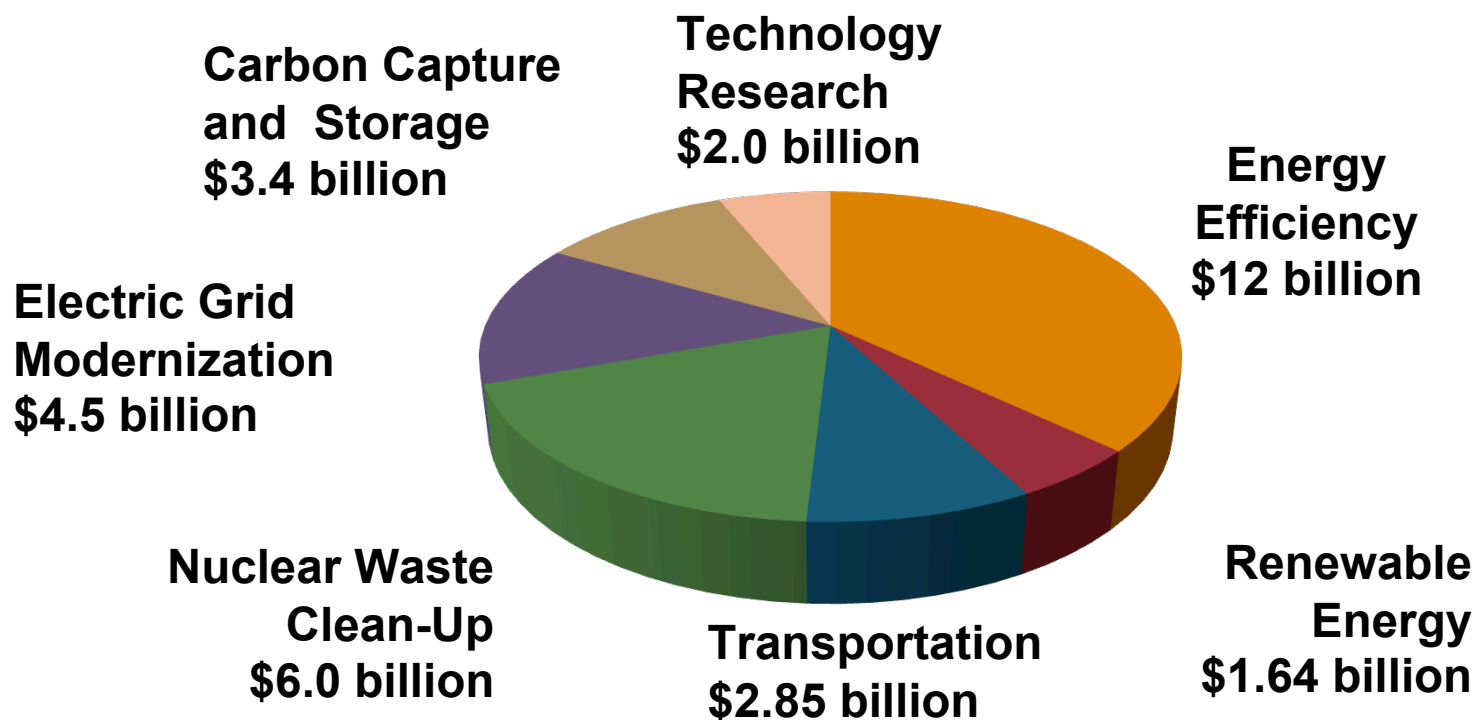


ARRA Funding Nationwide





ARRA Energy Funding

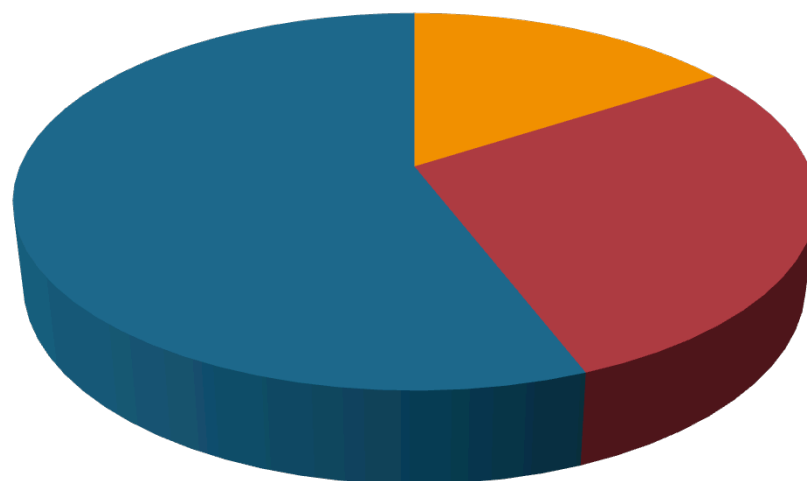




California ARRA Awards

**Tax Credits and Loan
Guarantees
\$2.845 billion**

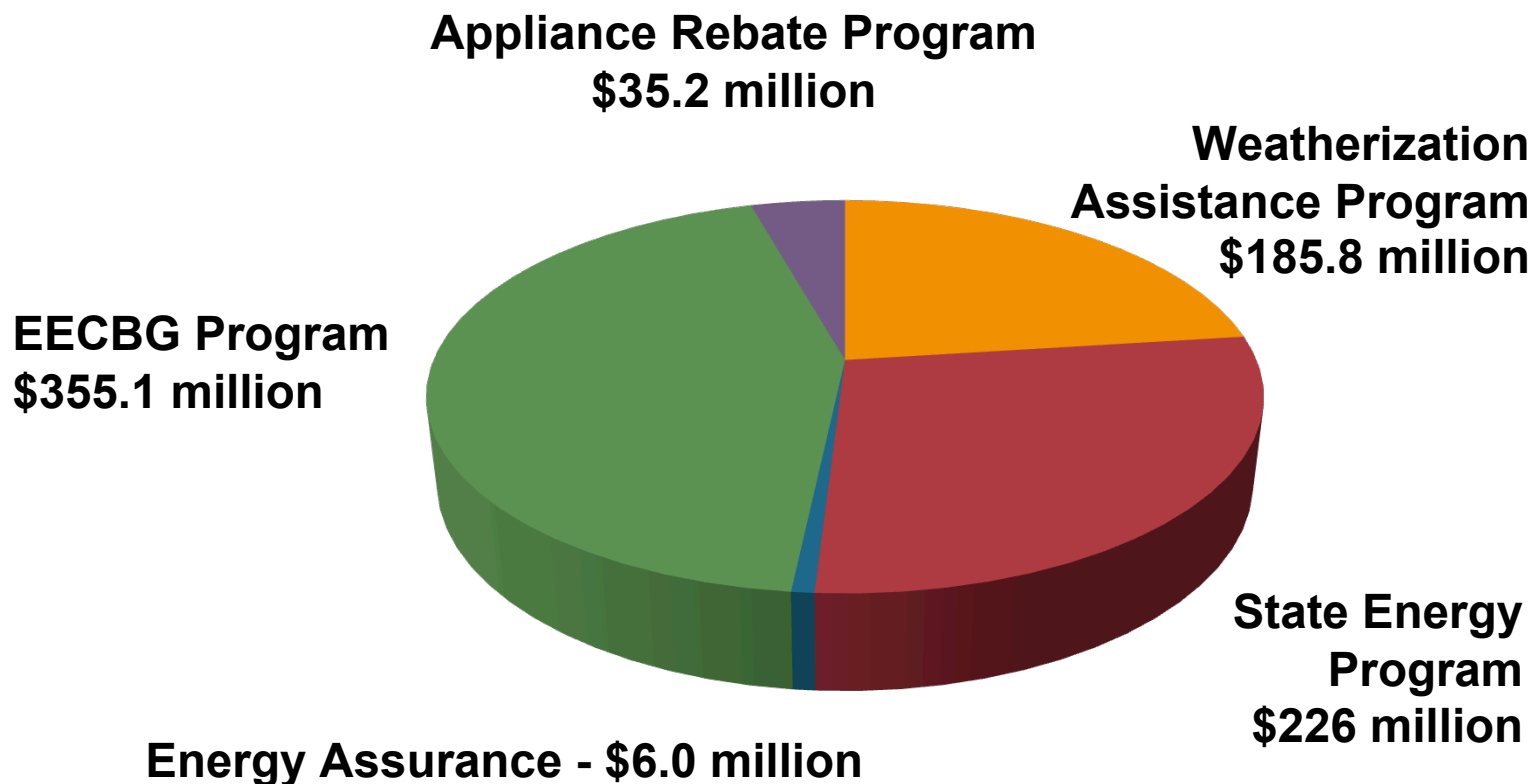
**Formula-based Grants
\$808.1 million**



**Competitive
Awards and
Contracts
\$1.443 billion**

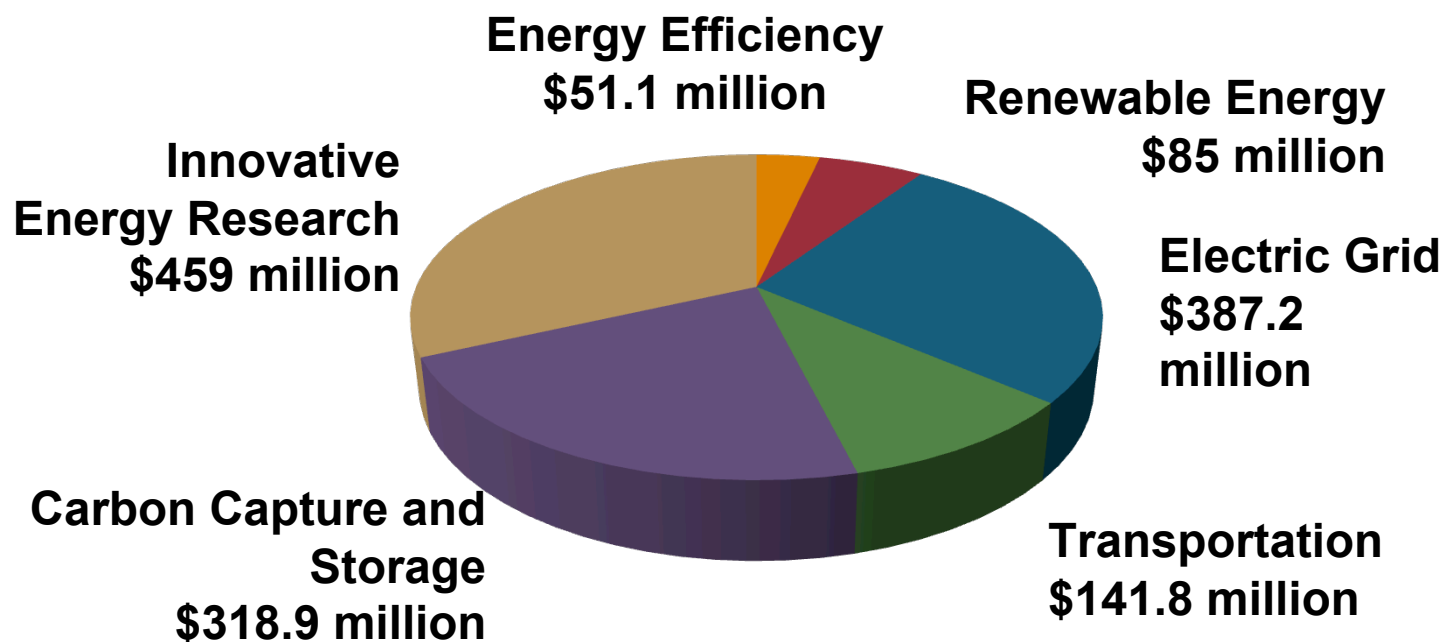


ARRA Formula Grants to California



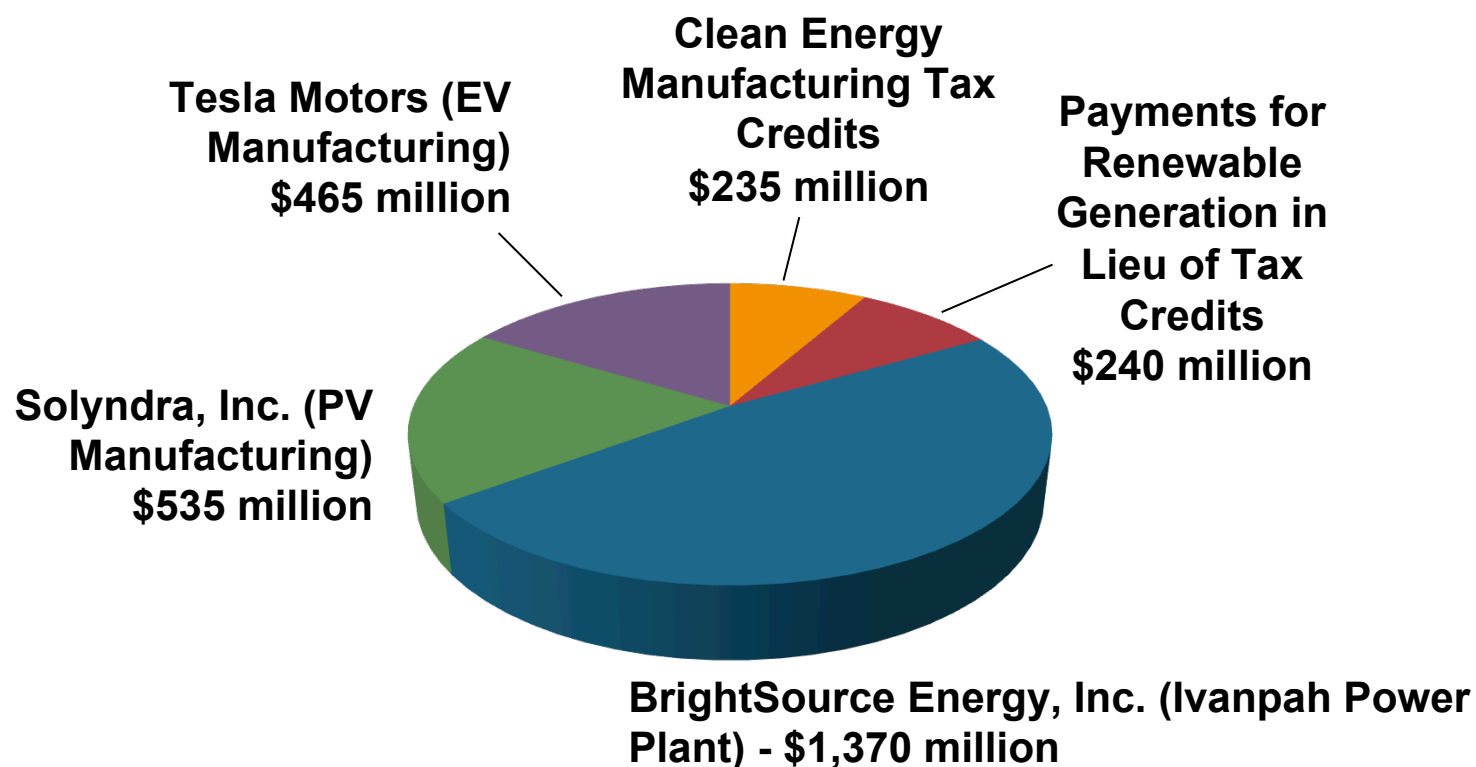


ARRA Competitive and Contract Awards





ARRA Tax Credits/Loan Guarantees





CEC Formula-Based Funding

- Administering \$314.5 million awarded by DOE through four programs:
 - State Energy Program (\$226 million)
 - EECBG Program (\$49.6 million)
 - Cash for Appliances (\$35.2 million)
 - State Energy Assurance Initiative (\$3.6 million)



State Energy Program

- Energy Upgrade California (\$113 million)
- ECAA Low-Interest Loan Program (\$25 million)
- DGS Loan Fund (\$25 million)
- Clean Energy Business Finance Program (\$20 million)
- Clean Energy Workforce Training Program (\$20 million)
- Program Support and Contracts (\$12.4 million)



Energy Upgrade California

- Umbrella energy efficiency retrofit program
 - California Comprehensive Residential Building Retrofit Program (\$50.2 million)
 - Municipal and Commercial Building Targeted Measure Retrofit Program (\$29.6 million)
 - Financing and administration (\$33 million)
- Integrated Web portal as one-stop shop for retrofit information





Energy Conservation Assistance Act Low-Interest Loan Program

- Revolving loan program for local jurisdictions to install energy efficiency and energy generation projects
- 21 loans funded by ARRA
- Loans repaid through energy savings
- Loans must be repaid within 15 years



DGS Energy Efficiency Revolving Loan Fund

- Revolving loans for efficiency improvements in state buildings consistent with Executive Order S-20-04 which calls for state buildings to reduce energy use by 20 percent by 2015
- Funded projects include lighting, HVAC, boilers, chillers, water heaters, etc.



Clean Energy Business Finance Program

- Intended to maintain existing manufacturing facilities and bring new manufacturing to California along with jobs and economic benefits
- Provides low-interest loans for in-state clean energy manufacturing facilities
- Awards to 8 solar PV companies



Clean Energy Workforce Training Program

- Provides training for the skilled workforce needed to implement clean energy development at the scale needed to support state energy policy goals
- Extensive partnerships with workforce training providers and industry to identify appropriate and relevant training needed



Program Support and Contracts

- Contract with Perry-Smith LLP to conduct review of CEC internal controls and recommend improvements, financial review of funding recipients, and develop project monitoring process
- Contract with KEMA, Inc. for comprehensive measurement, verification, and evaluation of ARRA-funded projects



Energy Efficiency and Conservation Block Grant Program

- Grants for cost-effective energy efficiency measures
- Minimum of 60% of funding to go to small cities and counties, remainder at CEC's discretion
- 208 grant agreements approved representing 70 percent of funding
- Efficiency improvements include streetlights, traffic signals, HVAC, and water pumping



Cash for Appliances Rebate Program

- Began April 22, 2010
- Rebates for washers, refrigerators, a/c, dishwashers, freezers, water heaters, and HVAC systems
- More than 77,000 rebates totaling \$10.4 million approved as of October 26, 2010



State Energy Assurance Initiative

- Updates to state and local energy assurance plans to address emergencies and ensure grid stability and resiliency
- Funding set aside for contracts



Leveraging ARRA Competitive Funds

- \$57 million provided from Public Interest Energy Research Program and Alternative and Renewable Fuel and Vehicle Program
- Helped bring \$620 million in competitive funding and \$1 billion in private match funds to California



Tax Credits/Loan Guarantees

- Tax credits for renewable energy, energy efficiency, and plug-in electric vehicles
- Payments in lieu of 30 percent tax credit
 - 157 renewable projects awarded \$240 million
- DOE loan guarantees for clean energy projects
 - 3 conditional awards to date



Renewable Power Plants

- 49 renewable plants (11,000 MW) proposed in California seeking ARRA assistance
- Includes 9 large solar thermal plants under CEC jurisdiction (4,043 MW)
- Required expedited permitting to meet federal ARRA deadlines
- Could provide as much as 17 percent of 33 percent by 2020 RPS target



CEC Funding Priorities

- Job creation and economic stimulus
- Lasting and measurable energy benefits
- Expend funds efficiently and accountably
- Contribute to state energy and environmental policy goals
- Leveraging and partnerships



Jobs and the Economy

- **Formula-based awards**
 - 6,000 jobs and \$600 million in public/private investment
 - Target areas with highest unemployment rates
- **Competitive awards**
 - 1,300 jobs, \$620 million in ARRA funding, \$1 billion in private investment



Jobs and the Economy

- 9 solar thermal plants
 - 10,000 temporary construction jobs
 - 1,400 full-time operations jobs
 - \$300 million in tax revenue
 - \$2 billion in materials purchases during construction
- Manufacturing facilities
 - 2,000 jobs



Workforce Training

- Clean Energy Workforce Training Program
 - Largest state-sponsored green jobs program in the nation
 - 9,000 participants trained
 - Ongoing community college curricula
 - Will provide the skilled workforce at the scale needed to meet state clean energy goals.



Energy Benefits

- Revolving loans for energy efficiency and clean energy manufacturing with repayments used to fund new projects
- Energy and cost savings continue after loans repaid
- Block grants for efficiency improvements in local jurisdictions



Energy Benefits

- Added PV manufacturing capacity of 500 MW per year contributes toward California Solar Initiative target of 3,000 MW by end of 2016
- Investments in transmission and alternative vehicle infrastructure and new power plants will provide benefits for decades



Accountability and Efficiency

- Took advantage of existing programs and processes to get money out quickly and minimize administrative cost and delay
- Streamlined state contracting processes and approvals
- Extensive public outreach
- Aggressive measurement, verification, and evaluation for ARRA-funded projects



Policy Goals

- ARRA funding will accelerate achievement of state energy and environmental policy goals
- Energy efficiency
 - Achieve all cost-effective energy efficiency
 - Reduce GHG emissions in electricity sector
- Renewables
 - Increase PV manufacturing capacity
 - Help meet RPS goals



Policy Goals

- Smart grid investments
 - Improve grid reliability and resiliency
 - Reduce peak energy demand
 - Integrate renewable resources
- Transportation investments
 - Reduce GHG emissions
 - Reduce petroleum consumption
 - Increase alternative fuel use



Partnerships

- Increased partnerships between government and private sector
 - Clean Energy Workforce Training Program
 - EDD, ETP, CWIB, Green Collar Jobs Council, community colleges, workforce investment boards, labor unions, employers, trade organizations
 - Clean Energy Business Finance Program
 - BT&H, financial development corporations



Leveraging

- Formula-based programs
 - Energy Upgrade California - \$496 million
 - ECAA - \$9.5 million
 - EECBG - \$24 million
 - DGS - \$6.8 million
 - CEBFP - \$85 million
- Competitive funding
 - \$620 million in ARRA funds
 - \$1 billion in private investment



Summary

- California receiving ARRA funding through:
 - Formula-based grants
 - Competitive awards and contracts
 - Tax credits and loan guarantees
- CEC funding administered through balanced portfolio of programs targeting immediate and long-term results



Summary

- ARRA funding will:
 - Overcome barriers to clean energy development
 - Provide the workforce needed to implement clean energy programs and meet energy policy goals
 - Establish a strong foundation for future energy programs and infrastructure
 - Accelerate achievement of energy and environmental policy goals



Questions?



Public Comment



Next Steps

- Written comments due November 8 (5 p.m.)
- Release proposed final report mid-December
- Considered for CEC adoption December 29